to maintain their Lebanese citizenship abroad are Christians, the overwhelming majority of whom are Maronites.

(c) The natural increase among the non-Christian population of the Lebanon, and particularly of the Shi'ah and the Druzes, is more than twice as great as that of the Christian population. These facts can serve as a key to explain various developments, the influence of which may be decisive in shaping the social character and political line of the Lebanon.

Any person reviewing the demographic problems of the Lebanon cannot but observe a number of factors common to the Christian population of the Lebanon and the Yishuv (the Jewish community) in Palestine. The natural increase of the Christians in the Lebanon is roughly equal to that of the Yishuv in Palestine.*

Against this, however, the Yishuv in Palestine has incomparably more potential reserve in the way of immigration from abroad than that which is available to the Lebanese Christians through the return of emigrants. And just as the chief concern of Zionism in Palestine is the creation of possibilities for the absorption of fresh immigrants from abroad, so the Christians of the Lebanon are faced first and foremost with the problem of preventing emigration from the country, and, in consequence, the creation of opportunities for absorbing emigrants who do return and who can return to their homeland, given suitable absorptive conditions. In addition, attention is devoted to the creation of opportunities for absorbing Christians who require a refuge.

The absence of dynamic economic resources in the Lebanon which could increase and expand the sources of livelihood for a progressive population has led to a steady emigration from the country since the middle of the last century. This process has chiefly affected the Christians whose requirements are more developed and whose living standards are higher than those of their Druze and Moslem neighbours; it has created a serious social and political problem which, taken together with their lower rate of natural increase, places the future of the Lebanese Christians in permanent danger.

Robert Widmer described the economic reasons for a migration from the Lebanon in the following passage:†

> "Lebanon is over-populated. As has been stated, the density of population is about 93 people to a square kilometre. In view of the topography of the country, its rocky mountains and its thin soil, its scarcity of mineral wealth, and its undeveloped industries, the land cannot support all its people. Consequently it is to be expected that some of them have to emigrate, leaving many dependents on their remittances."

As long as emigration was temporary, it was in many ways advantageous. To the general broadening of outlook resulting from contact with more advanced countries were added the material benefits of an increase in the country's capital (brought in by returning emigrants), an eco-

* Fourteen per-mille among the Christians of the Lebanon as against fifteen per-mille among the Jews of Palestine.

† S. Himadeh, *Economic Organization of Syria*, Beirut, 1936, p. 14.

The living patterns of the common residents generally resemble to the wife and non-working children living in the village for about three months in the summer. Heads of households and working children commute, usually by day and, of course, spend their vacations of two to four weeks in the village. This pattern is familiar to Americans who are afflicted with, in Lebanon, however, it is a money-saving device as well as an escape from the summer discomforts of the city. City living is definitely more expensive than village living. This has evidently always been true, but the situation has been greatly aggravated since 1939. In Beirut, food prices increased about five hundred per cent between 1940 and 1950, other commodities about four hundred per cent, causing severe hardship especially among the lower and middle classes (Gordon, 1950, pp. 101-02). This fact accounts for the occurrence of eight households in which the children and usually the wives live in the village all year around, while the husbands commute, usually returning to the village only on weekends.

When we look at Table 1 from the point of view of sources of income, we can deduce that the trend to urbanism is definitely increased or connected with urbanism in terms of residence only. Twenty-six (virtually 30 per cent) of the heads of household have city jobs and presumably support their families primarily thereby. In addition, a large number of unmarried young adults have city jobs. As we shall see shortly, the village is preponderantly dependent upon urban, rather than rural, sources of income. In this connection, we may cite Jaber who classifies Palestine, Lebanon, Syria, and western Turkey as an area in which less than 10 per cent of the population are dependent upon agriculture (Jaber, 1944, p. 341).

Twenty-five individuals are listed as "absent." Of these seventeen are women who have married outsiders and are living away from the village, returning only for occasional visits. Most of them are living in Lebanon. The remainder, eight persons, are living outside of Lebanon, mostly in England. They maintain contact with the village and are still legal residents of it.

The urban trend is more marked in Ellen than it is in the village proper, partly because Ellen is better located from the point of view of rapid communication with the outside. Ellen's population is as follows: residents, 30; commuters, 11; absent, 1; emigrated, 2; total 44. Three of its eleven households is wholly urban, and three of them are wholly summer.

CONCLUSIONS

A detailed study and discussion of Table 1 will bring out many of the important facts concerning the occupations of the villagers. Let us first consider the series of totals. The number of males for seventy-four of families who have gainful or purposeful employment outside the home, 171 to 44. The discrepancy in the ratio which these figures suggest is corrected by the fact that 110 females are housewives or "at home." The total of 74 heads of household does not tally with

VILLAGE LIFE VERSUS CITY LIFE

It should be apparent by now that the village as an institution is a significant focus of loyalty and identification for everyone in it regardless of age. This unity of sentiment is not, however, matched by unity of opinion as to which is better, living in the village or living in the city. On this three different points of view were expressed. (1) regret at the passing of the "good old days," coupled with complete resignation to the present situation; (2) regret at the passing of the "good old days" coupled with the desire to revitalize village life, by bringing in irrigation; (3) unequivocal preference for the material advantages and comforts of city life, without, however, much spiritual satisfaction in it. By adhering to any one of these views, the average Mangalli necessarily finds himself afflicted with nostalgia, frustration, or both.

Illustrative of the first point of view is the following quotation from the remarks of a middle-aged resident. The occasion was a moment when the investigator had stopped to talk about an enormous mound of small stones, one of many in the village.

> Our grandfathers worked very hard. They took the stones from the ground and put them here, as they could plant. Now people do not work hard. Our grandfathers worked hard, and they lived well. Here we are poor. They were not rich, but they were strong and well.

The second point of view was expressed by another middle-aged man as follows:

> Most of these young people now don't want to work the way their grandfathers did. They want to go to Beirut and make a few easy pounds. And when they get a job there, what happens? It costs so much to live there that they are not any better off than they would be here.
>
> I would like to see these young people settle down here on the land again. Most people here don't want to make a lot of money. All they really want is enough to make enough so they will not be hungry and without clothes. That is why we need to bring water to the village. The many who live on the land here are because the land is so poor, because it needs water.

One can read into this statement the problem which many of the young people face, educational aspirations leading away from village life and its satisfactions even and beyond the problem of adequate financial return.

The third point of view was revealed, in significantly ambivalent form, by a young adult who had received the highest type of education. He once remarked: "I think those of us who live in Beirut appreciate the ways of the village more than those who live in the village all the time." But he immediately added that there was very little to do in the village, and for a person of his interests and ambitions, this was certainly the truth. He went on to voice the concern of many young fellows

12: Churchill
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MEI Lebanon MEI

[For data on housing, occupations, income, expenditure, and similar data that may reflect on the standard of living in the city of Beirut, see entire source, category 116.]

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Syria ME1

In neither country is there an officer caste or a strong military tradition, though the present Syrian regime is trying to create one.

Social Survey

The ruling class in both countries is drawn from wealthy families; titles do not exist and the 'old' rich families, whose position and wealth come from land, mix freely with the 'new' rich families, whose money comes from commerce. There is no stigma in engaging in trade and even members of the upper class are merchants. A middle class of functionaries and employees has been growing up since 1918 in the three main cities. Their flats, between the splendour of the rich quarter and the huddle of the *suq*, are being built in quantities and their new, middle-class way of life is based on European standards. The mass of the people are artisans and labourers. The urban artisan approaches the middle class and the rural labourer approaches the hard life of the nomad; for the farm labourer the standard of living is generally low.

The Press

The press of both countries is important but no one paper or group of papers has established an ascendancy. Damascus had at one time over twenty daily papers none of which could guarantee a circulation of over 3,000. The same state of affairs holds true in Beirut where most parties issue Arabic and in some cases French papers; there are also Armenian newspapers and one English daily.

Individual Lebanese have founded papers and *Le Commerce du Levant*, published in Beirut, has a standing comparable with *Le Journal Égyptien*. In both countries press censorship has frequently closed down a paper only for it to re-emerge under another name, and in Syria the military dictatorship has reduced the press to a mere mouthpiece of official propaganda.

Education

In both countries there are primary and secondary schools, and the number of schools and students increase each year. Primary education is compulsory, and although reliable figures of literacy are not available,[1] it may be assumed that the percentage of illiterates is decreasing in both countries, but is higher in Syria than in Lebanon. In Syria, most of the schools are run by the state and of the private schools (which are

[1] The estimate for Syria for 1947 given in UN, Dept. of Social Affairs, *Preliminary Report on the World Social Situation*, 1952, was 49·9 per cent.

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SYRIA MDI
LEBANON MDI

figure until February 1953. The cost of living has likewise risen considerably; during the war it rose about sixfold, reaching a peak in 1945. It then decreased steadily until the autumn of 1950, when the Korean boom in raw material prices brought fresh inflationary pressures into Lebanon through her growing commercial and entrepôt trade, and persisted until early 1952. This fresh rise in prices was also caused by the rise in food prices (imported and home grown) following the bad harvest of 1951. Although early in 1953 prices had not resumed their pre-Korean level, they had declined steadily.

The following figures showing the indices of wholesale prices and the cost of living illustrate the salient movements in prices (1948 = 100):

	1939	1945	1947	1948	1949	1950	1951	1952
Wholesale prices	21	134	87	100	98	111	131	137
Cost of living	20	126	84	100	98	104	117	123

(Source: IMF, *International Financial Statistics*, September 1953.)

Budgetary expenditure and receipts have also increased considerably, partly resulting from the rise in prices but also from greater commitments. The main increase in expenditure has been for defence, for the Palestine conflict and its aftermath, and for education. The sources of revenue have undergone a marked change: whereas customs provided 60 per cent of the revenue in 1939, they now contribute only 23 per cent, and new indirect taxes on general consumption now provide the major share, about 30 per cent. A measure to increase direct taxation was introduced in September 1951 in the form of a tax on agricultural income based on a 'presumptive' assessment value at progressive rates of tax. As yet its full effect is not known. The budget estimates for 1952 were: expenditure £L34·03 million, and receipts £L34·18 million; further details are given in table 2 on p. 500 below. The 1953 budget was expected to be of the order of £L120 million.

The division between the Syrian and the Lebanese currencies became effective at the end of January 1948 and this introduced an agio between the two currencies. At first this favoured Lebanon, but in 1951 the Syrian pound was the higher and then, in 1952, the Lebanese pound returned to a premium of from 0·6 per cent to 0·7 per cent. The exchange rates of foreign currencies are given in table 3 on p. 503 below.

International Trade

In defiance of the gloomy prophecies of economists, Lebanon continues to flourish with an adverse trade balance, which in

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most in their minds. Furthermore, they put the new land under cultivation through an understanding with the local tribal chief. He guarantees them "protection" of the crop in return for a portion of the produce. Nowhere does the peasant figure in this deal other than as a laborer or a sharecropper. Nowhere do we see signs of the emergence of that badly needed class of small, independent, cultivator-owners.

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The situation in Lebanon presents a glaring and enlightening contrast between two systems. In the mountain area, the heart of the country, a strong tradition of private ownership by small independent farmers prevails. In most cases, the family farm averages about 10 acres. The soil is scanty and the terrain difficult; but the people have their hearts in what they own. They have blasted the rocks and built extensive terraces to prevent erosion; they have made the mountainsides produce abundantly of olives, grapes, figs, and apples. On the narrow coastal strips they have grown luxuriant orchards of citrus and bananas. More significant than all of this, we observe that the village folk in this area enjoy much higher standards of living. This is clearly manifested in their diet, health, housing, and a literacy rate of some 50 percent.

True, they have other sources of income, especially from emigrants residing abroad. Yet the independence they have gained through ownership of the land has endowed them with the initiative and the possibility to seek these other sources and better their living conditions. Unlike the sharecropper, who is doomed to his status, the small independent owner is free to move up the ladder.

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Our argument in this respect gains support from the situation that prevails in the east of Lebanon — in the Akkar plain of the north, in the Bika valley of the interior, and in the mountain area of the south. Here we witness the predominance of the same feudal-absentee-sharecropping system that exists in Syria and Iraq. Here also we witness the same conditions of deprivation, lack of development and low levels of living. Our argument gains further support from a consideration of living conditions in those village communities of northern Iraq, of some sections of Syria and Jordan, where the people are independent and own

increase the productivity per acre and also to expand the cultivated area per head.

In the Lebanon, however, with its steep hillsides under intensive cultivation, there is a definite pressure on land resources. The limits of intensification appear to have been reached, and a large part of the village population supplements its income by work in the towns, and by remittances from abroad. If the land tenure system in Syria were less oppressive, room might be found on the land for settlers from the Lebanon, but as things are, the standard of living and status of the Lebanese peasant is higher; compared with the Syrian peasant he is a free man, and there is no inducement to leave the Mountain for the underpopulated plains of central or northern Syria.

LAND TENURE

Corresponding to these different methods of farming, there are different systems of land tenure.[1] In Lebanon individual small ownership is well established, and the pattern of village life, with its broad class of small peasant owners, few large farmers, and a growing class of landless labourers, resembles that of Europe.

In Syria, the greater part of the land is owned by city notables—the ruling class—and cultivated by small share-tenants. Though individual ownership exists in some districts, for instance the Beqa Valley and the oasis of Damascus, the most usual form of landownership in the plain districts of Syria is share-tenancy. The villagers bring their corn to the village threshing floor, and when the grain is threshed the landlord or his agent stands by and takes one-half of the grain. Towards this crop he has contributed nothing; all labour, equipment, seed, livestock, have been supplied by the tenant, so that his share is rent purely for the use of the land. The landlord is almost always an absentee, a city notable who only visits the land to collect rent.

The share taken by the landlord varies from district to district, and also varies with the condition of the land. According to an inquiry made by the French authorities, the usual division of the crop for non-irrigated cereals is 40–50 per cent to the

[1] The information which follows is mainly based on A. Latron, *La Vie rurale en Syrie et au Liban* (Beirut, L'Institut Français de Damas, 1936). The brilliant and profound study by Jacques Weulersse, *Paysans de Syrie et du Proche-Orient*, is an indispensable authority which unfortunately was received only when going to press

irrigated. The whole of the land is cultivated every year, the rotation being wheat followed by potatoes, the potato crop being irrigated. The wheat yield is below the average for Syria, amounting to 6 hundredweight per acre, and the potato yield is 5 hundredweight per acre.

However, in spite of the greater intensity of cultivation, the shortage of land means that the majority of the peasants are not able to attain an adequate standard of living, measured in terms of a few essential commodities: 20 kilogrammes of wheat and 4 kilogrammes of meat per head per month, 100 kilogrammes of olive oil per annum, and 5 tins of kerosene. To attain this standard a family must own 3 hectares of land, and as only the rich peasants and a few of the medium peasants own so much, the majority of the medium peasants and the poor landless peasants do not achieve it. The majority of these supplement their income by remittances from their emigrant relations abroad. Those who have no income from abroad leave the village to work as unskilled workers or servants in the towns.

In this village, therefore, the cause of poverty is the shortage of land, since the land is much more equally distributed than in Syria and the system fairly intensive. Living conditions are far better than in Syria: the majority inhabit stone houses with two or more rooms. The richer peasants are also more sophisticated than those of Syria, preferring to gamble their money away in the neighbouring summer resorts rather than spend it on jewellery.

From these three studies three conclusions emerge. The first is that a higher income per acre depends on irrigation, since the net income from irrigated land is two or three times as high as from non-irrigated land."

INCOME PER HECTARE ON IRRIGATED AND NON-IRRIGATED LAND (in Syrian Pounds)

	Al-Hajib		Al-Ashrafi		Ein Jarud (Beqa'a Valley)
	Non-Irrigated	Irrigated	Non-Irrigated	Irrigated	Irrigated
Gross Income	350	880	208	870	870
Costs	140	440	75	380	440
Rent	—	—	50	300	—
Net Income	210	640	83	190	430

[Ein Jarud is in the north Lebanon -- Analyst]

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000 There are some possibilities of raising yields in dry farming, but they are limited, and the main hope for increasing farm incomes is a better use of water supplies.

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The second conclusion is that in every district half or more than half of the population live in extreme poverty, due to the low proportion of land cultivated, low yields, and the unequal distribution of land. In Lebanon, surplus rural population is the major cause of poverty. There is no motive-power making for progress: even richer peasants do not invest, but spend unproductively: the landlords are pure rent-receivers and the poorer peasants are entangled in a network of debt without hope of escape.

FRENCH LAND POLICY

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In regard to the *mulcke* system, which was widely prevalent at the time the French took over, the French authorities have hastened the process of disintegration. By decrees passed in 1923 and 1926 the periodical re-allotment of holdings (i.e., the *mulcke* system) was forbidden. Since the work of survey and settlement did not keep pace with the legislative enactment, this law meant an abrupt interference with village custom which contributed to agrarian unrest, particularly in the Hauran, where the *mulcke* custom was general. It appears to have been largely disregarded, and not to have been put into force by the Bureau de Cadastre (the French Survey Office, which is a private concession and not a government department), which undertook the work of land settlement.

M. Dieuffaret, the Director of the Bureau de Cadastre, considered that the *mulcke* custom had a real basis in the social life of the country and should not be abolished. Moreover it had often happened in Turkish times that title to land had been granted in divided holdings, but the titles were disregarded by the occupiers of the land, who continued to exchange their shares as before. The Bureau de Cadastre, therefore, when establishing title to land in a *mulcke* village have followed the practice of registering each villager's share in the land as a fraction of the total area, without attaching the title to any specific piece of land. This method tends to preserve the *mulcke* system. When title is registered to definite pieces of land, the Bureau de Cadastre have attempted in some cases to re-group the holdings

the land. In 1918-31, 180 villages comprising 181,000 hectares were colonized in small properties by 6,000 families. The Government of Latakia compelled large proprietors in the region of Homs to give up their villages in the district of Masyaf in 1929; the land was distributed among the occupying peasants and sold to them at a price to be paid for in ten annual instalments. The village of Jib Ramle was also settled in 1929, in part by occupying peasants, in part by refugee Armenians.

But the French administration did not complete the settlement of these areas. In some regions the Turks settled these lands with nomad tribes, who were themselves averse to cultivation and either rented the land to Alawi villagers or continued to live themselves as nomads on the land without cultivating much of it. Consequently this land is now very sparsely settled. Round Homs there are said to be 2,000 to 4,000 hectares with only 10 per cent of the land cultivated: this is some of the most fertile and best situated land in the country, and could be developed by colonization schemes.

In several respects the French authorities have modified the Turkish system in ways which strengthen the landowners against the cultivators. One of these was the sale of the extensive Waqf properties to business enterprises, irrigation companies, or landowners. Another was the abrogation of the right of ownership acquired by ten years cultivation which benefited the small cultivators in enabling them to acquire new land.

Efforts were made to start co-operative and agricultural credit banks, but these never succeeded in breaking the peasant's indebtedness. Several large-scale irrigation schemes were started, but produced more water than could be used. The educational system did not extend to the villages. Within the framework of the existing system, these reforms did little to raise the standard of the peasants. As a mandatory Power the French relied on the collaboration of the wealthy upper class, that is, on the landowners, and so could make no fundamental reforms in the land system.

POSSIBILITIES OF DEVELOPMENT

So far as dry-land farming is concerned the possibilities of improvement are hampered by the dry summer, which normally follows a long period of fallow. However, it would be possible by

[illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible]

[

[illegible] crude punishment by controlling the death of unregistered infants derived from the mobility of the meager data available. Local authorities believe that the mortality rate in children up to 5 years of age averages from 25 to 30 per cent for the country as a whole. It ranges from 10 to 15 per cent, or more, in Beirut proper to from 30 to 40 per cent in Tripoli, Sidon and the towns of the interior. In the more remote villages of South Lebanon, the standards of living are extremely low, and the mortality in children under 5 years of age probably reaches 50 to 70 per cent. Intestinal diseases are foremost among the causes of death in infancy and early childhood.

Some Economy

The economy of Lebanon is based upon agriculture, but the country is in a more favorable position than the neighboring Arab states, in that the national income is augmented by an increasing tourist traffic and by remittances to their families from emigrants living abroad. Although the coastal plain and the Bekaa valley support a variety of crops, a large part of the territory is mountainous and unsuitable for cultivation. The coastal region is cultivated intensively, with a series of narrow terraces extending along the seaward slopes of the Lebanon range up to an elevation of about 1,000 feet. Little more than 25 per cent of the total land area is now under production, while less than one fifth of that is irrigated. Considerable disparity exists between current estimates of the amount of arable land, but all agree that it can be increased materially by a greater utilization of the available water resources and by improved methods of cultivation. Progress here already has initiated by the further development of irrigation facilities, notably in the southern Bekaa, and in the Akkar plain, a triangular sector between the coast and the northern frontier with Syria. The tradition of private ownership is strong in the mountainous districts of the north, and most of the land is cultivated by independent [illegible].

Communications are excellent in the coastal districts, but some parts of the interior are inaccessible, especially during the winter months, when snow accumulates on the mountain ridges. Good roads stretch north and south along the coast and in the Bekaa, but the lateral connections are restricted by the nature of the terrain and the shortage of suitable natural passes across the mountains. Trunk highways skirt the coast and extend from Beirut to Damascus, linking Lebanon and Syria. Beirut is also linked with Damascus by a railway through Rayak, while a line from Rayak through Homs joins the Istanbul-Baghdad railway at Aleppo. Tripoli is linked with the latter system by a branch from Homs. A coastal railroad, extending from Tripoli to Haifa, was constructed by the British military forces during World War II, and the Lebanese portion is still in operation. Beirut, the principal modern port, handles a large volume of transit traffic for Syria, Jordan, Iraq and other parts of the Middle East. Tripoli is a port of secondary significance, except as an oil-shipping center. The ancient port of Sidon has recently been developed as the terminus of the trans-Arabian pipeline, serving as a Mediterranean port for the shipment of oil from the Saudi Arabian fields of the Arabian American Oil Company. The distances between local points are too short for the promotion of internal air services, but Beirut is an important junction for international airlines serving Europe and the Near and the Far East.

Food and Nutrition

The nutritional standards of the people differ according to the prosperity and the familiarity with food values of the individual families, but they are reasonably high in most parts of the country. Breads and a coarse-grained cereal known as burghul, which are usually prepared from wheat but sometimes from barley or millet, are staple foods in both urban and rural areas. Rice is popular among all groups of the population. Liberal amounts of milk are consumed

[illegible]

in the form of cheese, buttermilk and leben. The last a fermented product made from cow's milk. Fresh milk is rarely used, however, except in limited sections in the larger cities. In the rural districts, milk is obtained chiefly from sheep and goats, less frequently from cows. Legumes, potatoes, onions and other vegetables are widely cultivated. Grapes, leafy varieties are scarce in the inland districts, but wild herbs are found abundant on mountains. Many types of fruits are abundant, especially in the coastal valleys. They form important supplementary items of diet when in season.

Much of the meat is imported from Syria or Turkey, but relatively little reaches the people outside the larger towns. The average village widow consumes meat more than once a week. Mutton and, occasionally, beef are used most extensively. Both are employed, in a cooked or a raw state, in kebb, a national dish prepared from meat and burghul. Goat meat is found everywhere, while pork is available in the Christian communities. Poultry and eggs are plentiful in most localities and fish in the coastal region. Olive oil and butter are the primary sources of fats.

In spite of the generally satisfactory level of nutrition, a definite decrease in the consumption of protective foods is apparent in the inland districts and in South Lebanon. In 1950, the Lebanese government appointed a Nutrition Committee to promote a better understanding of the elementary principles of nutrition among the people. The different religious customs of the Moslem and the Christian communities influence their nutritional habits and limit the application of mass educational measures.

Housing

Lebanon has a large so-called middle class, and the disparity between the living conditions of the rich and the poor is less pronounced than in most of the neighboring countries. However, many families maintain financial and social contacts with

[illegible]

[illegible] Arab relations abroad. The villages are less compact than in other parts of the Near and Middle East, and separate farmsteads are common. Extremes of poverty, associated with primitive standards of sanitation, are most frequently encountered in the villages of southern Lebanon. In the cities, substandard housing is found chiefly in the old, congested quarters and in the Armenian sections.

[illegible] The typical dwellings in all parts of the country are constructed of stone, cement or concrete blocks, with a surface of white-washed or tinted plaster. The roofs are of two general types: pointed and of red tile, or flat, with a covering of cement or of mud and brush. The houses vary in size from one to several rooms, sometimes with two or more stories. The use of wood as a building material is prohibited by the fire regulations in the towns, but small wooden shacks are occasionally seen on the outskirts.

[illegible] Beirut is a cosmopolitan city, a mixture of Arabic and Western culture. The older districts of the city are overcrowded, with narrow streets lined by innumerable small shops, which frequently have living rooms in the rear. Apartment houses, interspersed with detached dwellings surrounded by colorful gardens, dominate the newer residential sections. Architecturally, all gradations are encountered between old Arab-style houses and modern villas.

[illegible] AND SANITATION

[illegible]

[illegible] Water supplies are obtained from streams, springs and wells, and, in general, are abundant in the coastal and the mountain districts but deficient in the interior. Beirut derives its water supply from the Nahr el Kelb, or Dog River, which is led from an underground spring in the hills about 10 miles from the city. It flows by gravity through a tunnel and open canals to Dekouane, 5 miles distant, where it is treated [illegible] preliminary rapid filtration, slow sand

[illegible] p. 104(A)

which are due to pseudysentery strains, are prevalent. Shigella paradysenteriae (Flexner), S. sonnei (Sonne), S. sonnei (Schmitz) and S. dysenteriae (Shiga) are generally isolated in the bacteriological laboratories of the American University hospital, usually in the order given. Enteritis and diarrhœa are widespread, particularly among the children in the poorer quarters of the cities and in rural villages, where low standards of sanitation prevail. Bacillary dysentery and other forms of diarrhœal disease are prevalent throughout the summer months.

Cholera. Cholera has not been reported from Lebanon since 1902. When cholera occurred in Syria in 1947, subsequent to the epidemic in Egypt, quarantine regulations were enforced by the Lebanese health authorities, and immunization against cholera was made compulsory. Emergency immunization centers were established in all parts of the country.

Helminthiases. Ancylostomiasis. Infection with hookworm infection, caused by *Ancylostoma duodenale*, exist in the agricultural districts of the littoral. The most heavily infected foci are found in the irrigated orange and banana growing areas north and south of Beirut, where the environmental conditions favor the development of the larvae. In a survey in 1950-51,* infection was present among 10 per cent of the villagers examined in the Damour region, near Sidon. The infection rates were consistently high in all age groups, and, although the degree of infection was relatively light, the accompanying anemia was often severe. Comparable examinations among 324 rural inhabitants in the Jezzine-Ankiyeh district, near Beirut, showed infection in 10 per cent, with rates ranging from 21 per cent in children up to 4 years of age to 44 per cent at 5 to 10 years of age. Small numbers of cases are found in other farming communities in the coastal plain and in the interior. In the villages studied around Tyre and Tripoli, the infection rates did not exceed 3 per cent, while in 3 villages

Other Infections. Pneumonia and influenza are common. A serious epidemic of influenza occurred in 1950, in which over 2,000 known cases were recorded between February and June and over 800 in the month of March.

Measles, whooping cough and mumps are endemic and frequently epidemic. Scarlet fever is rare. A high degree of immunity is apparently acquired at an early age by the local inhabitants, since repeated surveys, using the Dick test, have shown that the rate of susceptibility to scarlet fever native to live in adolescents and adults. In a Dick test study carried out in 1948[illegible] on 610 children, from 2 to 14 years of age, in different schools in Beirut, negative reactions were obtained in 72 per cent. The number of children giving a positive reaction to the tests decreased gradually from 77 per cent at 4 to 7 years of age to 6 per cent at 12 to 14 years of age.

Poliomyelitis is normally sporadic, and the first widespread outbreak was reported in 1952. In the 3 months from June to September, 65 cases and 9 deaths were recorded from various parts of the country. Over 70 per cent of the cases were among children under 3 years of age. Rheumatic fever is prominent among the diseases of childhood.

Diseases Spread on Contaminated Objects Transmitted Contact

Venereal Diseases. Venereal diseases are widely distributed, but little information is available regarding their prevalence in the general population. Syphilis and gonorrhea predominate, but all forms of venereal disease are encountered, especially in Beirut, which is a center for traffic from the east and the west.

Diseases of the Eyes. Trachoma is a major public health problem in sections of northern Lebanon, where a large percentage of the people live in small and often crowded villages and the standards of living and sanitation are generally low. The extent of infection varies in different localities, but

In some villages at least 80 per cent of the inhabitants are affected. The disease is encountered less frequently in the north, except in certain congested quarters of Beirut and Tripoli, which house large numbers of workers from the south. In most areas, a higher rate of infection prevails among the Moslems communities than among the Christians. According to the statistics of the Ministry of Public Health, the incidence has decreased appreciably since 1941. A total of 1,040 cases was reported in 1949, in contrast with over 4,000 cases in 1941. The recorded cases, however, represent a small fraction of the actual prevalence. In a study of roughly 100,000 cases from all parts of the country, undertaken by doctors from the American University of Beirut in 1938,[1] the infection rates were estimated at 40 per cent in South Lebanon, 15 per cent in the Bekaa, 10 per cent in North Lebanon and 5 per cent in Mount Lebanon. They averaged 1 per cent in Beirut district, but reached 30 per cent in some of the poorer quarters of the city.

Acute conjunctivitis is widespread from June to December, and particularly between August and October, when the flies are abundant. About two thirds of the cases are usually attributed to infection with *Bacterium conjunctivitidis* (Koch-Weeks bacillus). A large proportion of the remainder are of pneumococcal origin. Cases of gonococcal conjunctivitis are relatively infrequent.

A special hospital for the treatment of trachoma and other eye diseases has recently been established by the health authorities at Tripoli, an important focus of trachoma in South Lebanon. Measures for the improvement of sanitary conditions are also being carried forward in many villages.

Diseases of the Skin. Mycotic infections, especially favus and ringworm of the scalp or the skin, are common. The majority of cases of dermatophytosis are caused by *Achorion schoenleini*, *Trichophyton violaceum* or *T. gypseum*. Lupus is sometimes seen in the dermatology clinics.

Cases of impetigo are commonly, often following lesions produced by the irritating effects of the sun. Scabies and pediculosis are encountered in the crowded sections of the cities and in the poorer rural villages. Both were widely distributed during the war years 1941-46, when the scarcity of soaps and clothing contributed to increased unhygienic conditions. Cases of human myiasis are observed occasionally.

Leprosy. Leprosy is endemic, and cases are reported sporadically. Thirty-one cases were known to exist in Lebanon in 1950. Of this number, 7 were located in South Lebanon and 11 in the Hermil area of the northern Bekaa, while 13 were irregularly distributed throughout the rest of the country. With the exception of one 17-year-old boy in Beirut, all the cases were from rural communities. No young children were included, and most of the affected individuals were over 35 years of age. Clinically, about 75 to 80 per cent of the cases were lepromatous in type. There is no hospital for the treatment of leprosy in Lebanon, but patients are sent at government expense to the leprosarium at Dwaira, near Damascus.

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164 329 foci of malaria persisted in the 'Akkar plain, in sections of the northern and the southern Bekaa and in scattered districts in the Lebanon mountains. A malaria survey, to implement and correlate the previous studies, and a demonstration control program were inaugurated in 1951 by the Ministry, in co-operation with the World Health Organization.

164 331 329 Rickettsial Infections. Louse-borne typhus apparently is not endemic, but occasional outbreaks have been recorded, usually during periods of social distress. Infestation with lice is common among the inhabitants in the poorer urban and rural districts, and minor epidemics have followed the introduction of the disease from surrounding areas in the Near East. No cases were reported during the war years 1941-45, and the widespread employment of DDT sprays in the towns and the villages has materially reduced the danger of infection. Murine typhus is indigenous, however. Sporadic cases are observed from all parts of the country, the majority of which occur during the summer months, from July through September. The disease is typically mild, with a comparatively low fatality rate. The actual prevalence is unknown, due to the general confusion in diagnosis and the lack of facilities for laboratory confirmation outside Beirut. The causative agent, *Rickettsia mooseri*, has been isolated from rats captured in Beirut. The rat flea, *Xenopsylla cheopis*, is the vector.

164 744 Cases of fièvre boutonneuse are sometimes reported, in which the dog tick, *Rhipicephalus sanguineus*, is the probable vector. Since the diagnosis has been established primarily in hospitals in Beirut, the extent and the distribution of the infection are uncertain.

164 330 Plague. Serious outbreaks of plague have been recorded in the past, but only sporadic cases have been reported since the early 1930s. The last case, a bubonic infection, was seen in 1947 in a village on the outskirts of Beirut. Many local authorities believe that the infection exists among the wild

isolated from Djounieh, on the coast about 20 miles north of Beirut. Microfilaria, supposedly of *Wuchereria bancrofti*, were found in the blood of 3 cases, while the fourth showed symptoms of hydrocele. Local authorities believe that the infection was introduced by African troops stationed in the area during World War II. Potential *Culex* vectors are abundant.

NUTRITIONAL DISEASES

Undernutrition is seen predominantly among the children in the congested urban districts and in the poorer villages, where poverty, ignorance and, sometimes, intestinal parasitism are contributory factors. Nutritional diseases are relatively rare, but subclinical manifestations of avitaminosis are frequent. Rickets is often observed in South Lebanon; cases are attributed to the fact that many children are improperly fed and are confined indoors for long periods while their parents are at work in the fields.

Goiter is endemic in the vicinity of Zahle and Djezzin. Cases of cretinism are occasionally encountered.

MISCELLANEOUS CONDITIONS

Sporadic outbreaks of infectious hepatitis are reported, usually in the late summer or the fall. Children are primarily affected, but all age groups are represented in the various epidemics. Cases of encephalitis lethargica are diagnosed from time to time.

Q fever is enzootic among the livestock, and undoubtedly exists to some degree in the general population. In studies from the bacteriology department of the American University of Beirut,[illegible] a large proportion of positive reactions were obtained in complement fixation tests on blood serum samples from sheep, goats and cattle received from various countries in the Near East. In the serums collected from animals in Beirut, positive reactions were obtained in 23 per cent of 225 sheep tested, in 24 per cent of 134 goats and in 8 per cent of 97 cattle. The reaction rates with the serums from smaller numbers of animals from Tripoli

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